

REMARKS

Applicant requests favorable reconsideration and withdrawal of the rejection set forth in the above-mentioned Office Action in view of the foregoing amendments and the following remarks.

Claims 1-3 and 5-9 are now pending, with claim 1 being the only independent claim. Claim 4 has been cancelled without prejudice or disclaimer of subject matter. Claims 1 and 7 have been amended herein. Support for the amendments can be found throughout the originally-filed disclosure, of the specification, as well as in the drawings. Accordingly, Applicant submits that the amendments do not include new matter.

Claims 1-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,822,472 (Danielzik et al.) in view of U.S. Patent No. 6,558,958 (Pilevar et al.).

Applicant respectfully traverses the rejection. Nevertheless, without conceding the propriety of the rejection and solely to expedite prosecution, Applicant has amended independent claim 1 to clarify certain features not suggested by the cited art. Applicant submits that claim 1, together with the claims dependent from it, are patentable over any combination of the cited art for at least the following reasons.

Independent claim 1 recites an optical analysis device. As amended, the device comprises a cylindrical columnar light-transmitting member, light separating means, condenser means, detecting means, and a flow path. The light-transmitting member has an external face for immobilizing a detection-objective substance, a first end, and a second end. Exciting light is introduced into the first end of the light-transmitting member and

transmitted through it. Fluorescence light is generated by excitation of the detection-objective substance by the exciting light. The fluorescence light is separated from exciting light by the light separating means, when the detection-objective substance is immobilized by the external face, which is at the second end of the light-transmitting member. The condenser means condenses the separated fluorescence light, and the detecting means detects the condensed fluorescence light. The flow path covers the light-transmitting member and has an inlet for introducing the detection-objective substance and an outlet for discharging the detection-objective substance. The whole surface of the region of the light-transmitting member covered with the flow path is in contact with a medium which exists in the flow path.

The Office Action generally relies on the planar optical sensor platform of Danielzik et al. for a teaching of the optical analysis device of claim 1.

In Applicant's view, Danielzik et al. discloses a process for determining luminescence with a planar dielectric optical sensor platform. The sensor platform has a thin transparent waveguiding layer located on a transparent substrate. The sensor platform is further provided with a coupling grating for input-coupling of the excitation light. The luminescence is determined by bringing a liquid superstrate into contact with the transparent waveguiding layer and measuring the luminescence produced by the substance having luminescence properties in the sample, or by substances having luminescence properties immobilized on the transparent waveguiding layer. (See Column 3, lines 26-37 of Danielzik et al.) Thus, Danielzik et al. merely discloses bringing the transparent waveguiding layer into contact with a liquid sample.

The Office Action asserts on page 3 that shown in Figure 1 of Danielzik et al. is a flow path within the device having an inlet and outlet. Applicant submits, however, that nothing in Danielzik et al. discusses a flow path for providing contact between the transparent waveguiding layer and a liquid. Further, Figure 1 only discloses the sensor platform 1. As discussed at column 6, lines 5-8 of Danielzik et al. and shown in Figure 1, waveguiding layer 4 is located above substrate 5. Coupling grating 2 and coupling 3 are also shown. However, Figure 1 does not depict any flow path. The arrow shown in Figure 1 depicts the movement of the light through the waveguiding layer 4. Accordingly, Danielzik et al. fails to teach or suggest a flow path which covers a light-transmitting member and the flow path having an inlet for introducing a detection-objective substance and an outlet for discharging a detection-objective substance, and the whole surface of a region of the light-transmitting member covered with the flow path being in contact with a medium which exists in the flow path, as recited in amended independent claim 1.

Pilevar et al. is not understood to remedy the above-noted deficiency of Danielzik et al. In Applicant's view, Pilevar et al. relates to an optical fiber evanescent field excited fluorosensor and method of manufacture. Although a flow cell 211 is used in the creation of the fiber, Pilevar et al. is completely silent regarding an optical analysis device comprising a flow cell 211. Therefore, Pilevar et al. also fails to teach or suggest at least a flow path which covers a light-transmitting member and the flow path having an inlet for introducing a detection-objective substance and an outlet for discharging a detection-objective substance, and the whole surface of a region of the light-transmitting member covered with the flow path being in contact with a medium which exists in the flow path,

as recited in amended independent claim 1. Moreover, there is no apparent reason to conclude that one of ordinary skill in the art would not be motivated to combine the flow cell 211 used to create a fiber with the device in Danielzik et al. for determining luminescence with a planar dielectric optical sensor platform.

Accordingly, Danielzik et al. and Pilevar et al., whether taken individually or in combination, fail to teach or suggest the present invention as recited in amended independent claim 1.

The remaining claims are directly or indirectly dependent from claim 1. Thus, these claims also are patentable at least by virtue of their dependencies. Because the dependent claims each recite features in addition to those recited in claim 1, Applicant requests individual reconsideration of the dependent claims.

For at least the foregoing reasons, Applicant submits that the claimed invention is patentable over Danielzik et al. and Pilevar et al.

In view of the foregoing amendment and remarks, Applicant respectfully requests favorable reconsideration and passage to issue of the application.

Application No. 10/553,870

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continued to be directed to our address given below.

Respectfully submitted,

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